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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,886	10/08/2003	Hiroyuki Tanaka	693.007	6440
23598	7590	01/26/2006		
BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ, S.C. 250 E. WISCONSIN AVENUE SUITE 1030 MILWAUKEE, WI 53202				
			EXAMINER WONG, ERIC K	
			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No. 10/680,886	Applicant(s) TANAKA ET AL.	
	Examiner Eric Wong	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

RCE

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/15/2005 has been entered.

Response to Arguments

Applicant's arguments have been taken into consideration prior to drafting this office action. It is noted, however, that MPEP 2111.03 states that for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising" (Specification discloses and indicates in figure 7 that more than a single lens may be used and would not materially affect the basic operation of the claimed invention).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Number 5,799,121 to Duck et al (hereinafter Duck), and further in view of United States Patent Number 4,111,524 to Tomlinson III (hereinafter Tomlinson).

Duck discloses in figure 3, a filter module consisting essentially of a single GRIN lens (14), optical fibers (10, 12), an optical filter (37), and a total reflection mirror (16) arranged to face the optical filter, wherein said optical fibers are arranged on a single side of said lens, wherein the filter module is configured to receive a signal and output a filtered portion of the signal and an unfiltered portion of the signal on the single side of said lens.

As to claim 6, the filter is a wavelength selective filter (column 3, line 6) and is substantially collimated (column 2, line 41).

However, Duck fails to explicitly disclose the use of three optical fibers, but does disclose the ability to use multiple fibers and multiple ports. Furthermore, Duck takes into consideration space savings

Tomlinson discloses in figure 2, an optical filter module with three optical fibers in a capillary (14) and a lens configured on one side of a reflective surface in order to multiplex light signals.

Since Duck and Tomlinson are both from the same field of endeavor, the use of three fibers as disclosed by Tomlinson would have been recognized in the pertinent art of Duck.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use three optical fibers on one side of a reflective surface as disclosed by

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Tomlinson in the filter module of Duck for the motivation of increasing bandwidth and saving space.

4. Claims 7-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duck in view of Tomlinson (hereinafter DIT) as applied to claims above, and further in view of Applicant's disclosure of prior art.

DIT discloses an optical filter module as claimed, but fails to explicitly disclose multiple filter modules arranged together in a cascade formation. Examiner notes that DIT does not specifically limit the device to ONE module, and by merely providing for another module is commonly known in the art.

Applicant discloses in figure 9, such a cascade formation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the module as disclosed by DIT in the cascade formation as disclosed by Applicant in order to increase bandwidth for a WDM system.

5. Claims 4, 10, 14-16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over DIT as applied to claims above, and further in view of United States Patent Number 6,499,886 to Mizuno et al.

DIT discloses the filter module as claimed except for a capillary tube having 3 walls connected to each other. It is noted that it is commonly known in the art to select a known shape to support optical fibers for the purposes of limiting movement. Naturally, a triangle shape with three walls would best suit the configuration of three fibers.

Mizuno et al. discloses a capillary tube having three walls holding three optical fibers shaped in a triangle.

Since DIT and Mizuno et al. are both from the same field of endeavor, the use of a capillary tube as disclosed by Mizuno et al. would have been recognized in the pertinent art of DIT.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the three walled triangle configuration disclosed by Mizuno et al. in the holding tube of DIT, for the purpose and motivation of further securing optical fibers in order to reduce movement and optical losses resulting therefrom.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. United States Patent Number 4,521,071 to Bohm.
- b. United States Patent Number 4,474,424 to Wagner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wong whose telephone number is 571-272-2363. The examiner can normally be reached on Monday through Friday, 830AM - 430PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature consisting of a stylized 'E' and 'W' connected together, with a long horizontal line extending to the right.

EW

A handwritten signature in cursive script that reads 'Frank G. Font'.

Frank G. Font
Supervisory Patent Examiner
Technology Center 2800